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For:

FERROELECTRIC FIBERS AND APPLICATIONS THEREFOR

Response to Office Action

ASSISTANT COMMISSIONER FOR PATENTS Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. § 1.116 and in response to the Office Action mailed October 12, 2001 it is respectfully requested that the Examiner reconsider the present application in view of the following amendments and remarks.

Remarks

Applicants' attorney thanks the Examiner for her comments. Pursuant to 37 C.F.R. § 1.116, reconsideration of the present application in view of the foregoing amendments and the following remarks is respectfully requested. Applicants' note that multiple attempts have been made to reschedule the Examiner interview which was scheduled to take place prior to the filing of this Response, but which was postponed because of flight cancellations as a result of bad weather.

The present invention relates to a fiber which includes a thermoplastic polymer and particles of a ferroelectric material dispersed therein. The thermoplastic polymer may be, for example, a polyolefin, such as polypropylene or polyethylene, and the ferroelectric material may be barium titanate. The ferroelectric material may be present at a level of from about 0.01 to about 50 percent by weight (from about 0.001 to about 13 percent by volume), and will have a longest particle dimension in a range of from about 10 nanometers to about 10 micrometers. The fiber may be exposed to an electric field. A plurality of the fibers may be employed to form a knitted or woven fabric or a nonwoven web. Also provided is a method of preparing fibers containing particles of a ferroelectric material. The method includes destructuring the ferroelectric material in the presence of a liquid and a surfactant to give destructured particles; the liquid is a solvent for the surfactant and the surfactant is adapted to stabilize the destructured particles against agglomeration. A blend of the stabilized, destructured ferroelectric material